

Further guidance is provided by the Royal College of Paediatrics and Child Health (<https://www.rcpch.ac.uk/>), the British HIV Association (BHIVA) guidelines on the use of vaccines in HIV-positive adults (BHIVA, 2015) and the Children's HIV Association (CHIVA) immunisation guidelines <http://www.chiva.org.uk/guidelines/immunisation/>

Severe asthma or active wheezing

LAIV is not recommended for children and adolescents with severe asthma or active wheezing, for example those who are currently taking oral steroids or who have been prescribed oral steroids in the last 14 days for respiratory disease. There is limited safety data on children who are currently taking a high dose of an inhaled steroid – Budesonide >800 mcg/day or equivalent (e.g. Fluticasone >500 mcgs/day) – such children should only be given LAIV on the advice of their specialist. As these children are a defined risk group for influenza, those who cannot receive LAIV should receive an inactivated influenza vaccine.

Vaccination with LAIV should be deferred in children with a history of active wheezing in the past 72 hours or those who have increased their use of bronchodilators in the previous 72 hours. If their condition has not improved after a further 72 hours then, to avoid delaying protection in this high risk group, these children should be offered an inactivated influenza vaccine.

Children in this clinical risk group and aged under nine years who have not been previously vaccinated against influenza will require a second dose whether given LAIV or inactivated vaccine.

Egg allergy

In all settings providing vaccination, facilities should be available and staff trained to recognise and treat anaphylaxis (see **Chapter 8**).

Inactivated influenza vaccines that are egg-free or have a very low ovalbumin content (<0.12 µg/ml - equivalent to <0.06 µg for a 0.5 ml dose) are available (see below) and studies show they may be used safely in individuals with egg allergy (des Roches *et al.*, 2012). LAIV (Fluenz Tetra®), which had an upper ovalbumin limit of 1.2 micrograms/ml, has also been shown (JCVI, 2015) to be safe for use in most egg allergic children (see below). Since 2016 the ovalbumin content of LAIV has been reduced to ≤0.12 micrograms/ml (≤0.024micrograms/0.2ml dose). The ovalbumin content of influenza vaccines will be published prior to the influenza season (see <https://www.gov.uk/government/publications/influenza-vaccine-ovalbumin-content>).

Children

JCVI has advised (JCVI, 2015) that, except for those with severe anaphylaxis to egg which has previously required intensive care, children with an egg allergy can be safely vaccinated with LAIV in any setting (including primary care and schools); those with clinical risk factors that contraindicate LAIV should be offered an inactivated influenza vaccine with a very low ovalbumin content (less than 0.12 micrograms/ml).